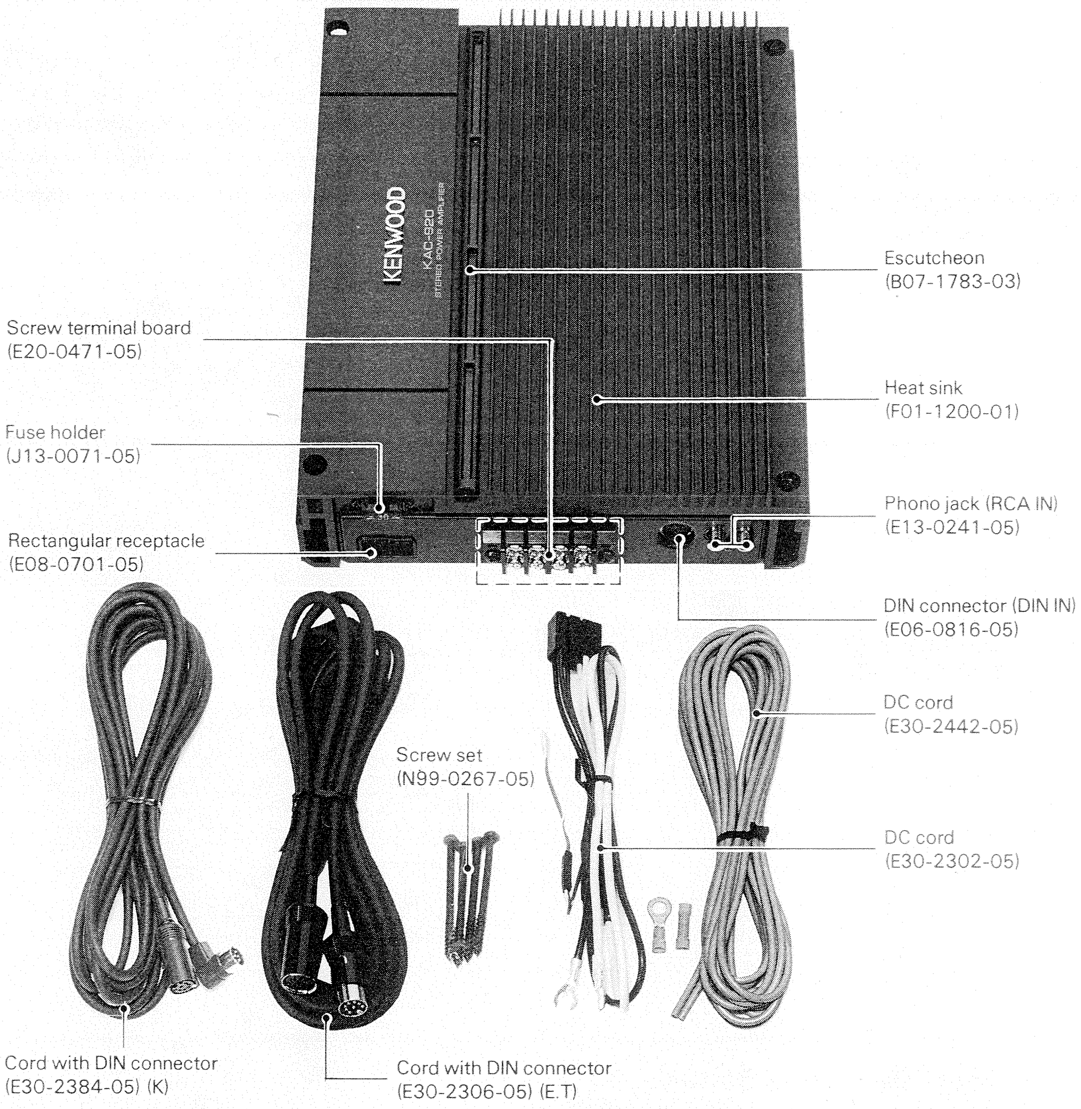
STEREO POWER AMPLIFIER

KAC-920

SERVICE MANUAL

KENWOOD

©1988-1 PRINTED IN JAPAN
B51-3444-00 (B) 2496

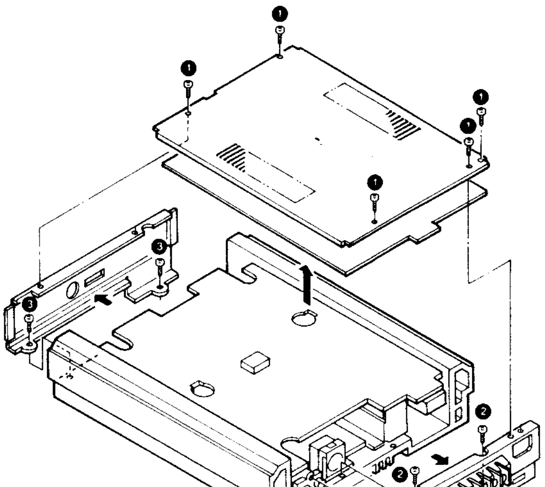

KENWOOD
KAC-920
STEREO POWER AMPLIFIER
Escutcheon
(B07-1783-03)
Screw terminal board
(E20-0471-05)
Heat sink
(F01-1200-01)
Fuse holder
(J13-0071-05)
Phono jack (RCA IN)
(E13-0241-05)
Rectangular receptacle
(E08-0701-05)
DIN connector (DIN IN)
(E06-0816-05)
DC cord
(E30-2442-05)
Screw set
(N99-0267-05)
DC cord
(E30-2302-05)
Cord with DIN connector
(E30-2384-05) (K)
Cord with DIN connector
(E30-2306-05) (E.T)

CONTENTS

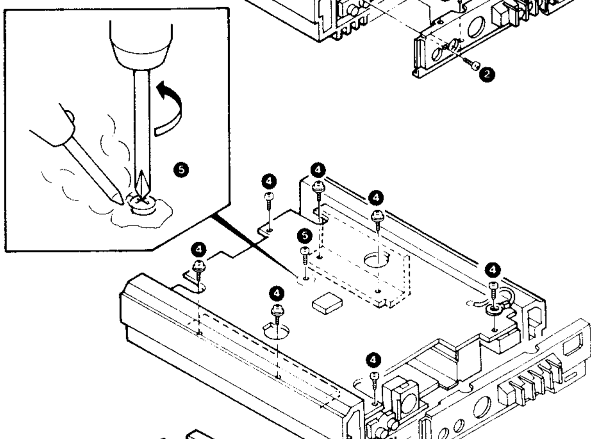
DISASSEMBLY FOR REPAIR 2
BLOCK LEVEL DIAGRAM 3
CIRCUIT DESCRIPTION 4
ADJUSTMENT 4
REGLAGE 4
ABGLEICH 4
PC BOARD (Component Side View) 5
PC BOARD (Foil Side View) 9
SCHEMATIC DIAGRAM 13
EXPLODED VIEW 17
PARTS LIST 18
SPECIFICATION 24

DISASSEMBLY FOR REPAIR

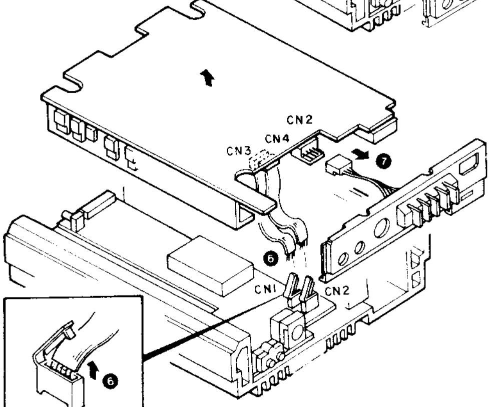
1. Remove the 5 screws (❶) from the bottom cover.
2. Remove the 3 screws (❷) from the rear panel.
3. Remove the 2 screws (❸) from the front panel.



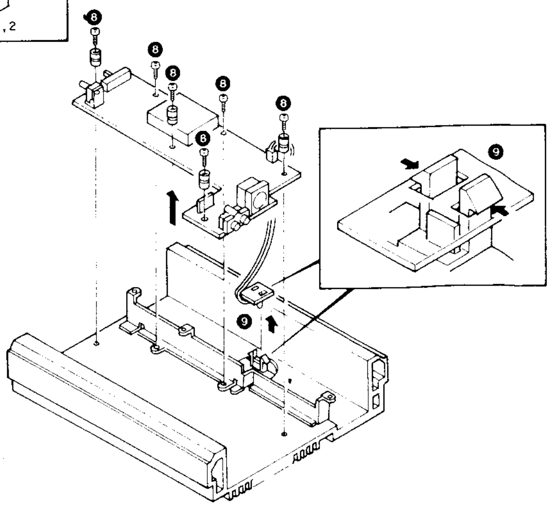
4. Remove the 7 screws (❹) from the PC Board.
5. Melt the solder fixing the screw (❺), and remove the screw using a screwdriver.



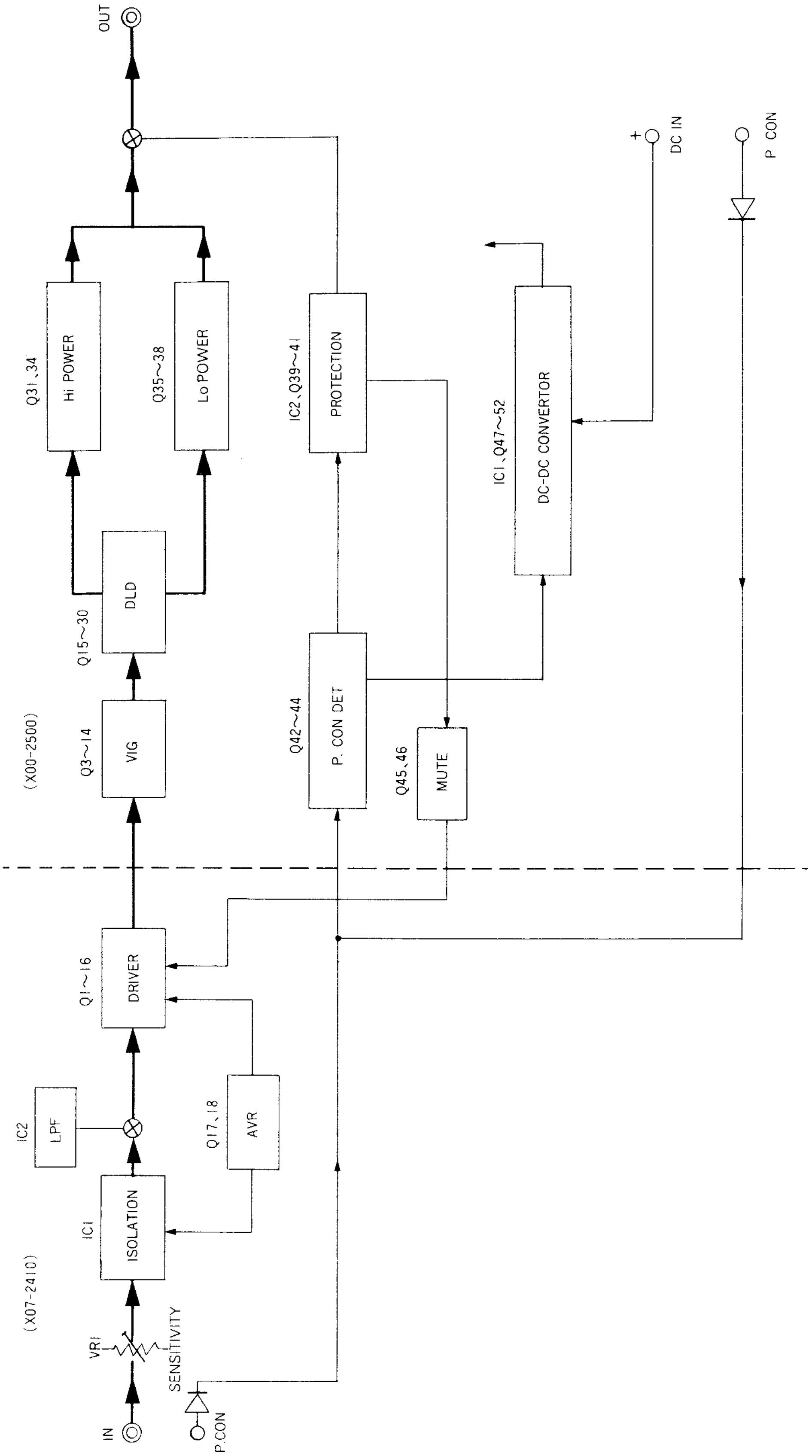
6. Disconnect connectors CN1 and CN2 (❻).
7. Disconnect connector CN4, and remove the PC Board in the direction of the arrow (❼).



8. Remove the 6 screws (❽) from the PC Board.
9. Remove the PC Board on which the diode is mounted, by pushing the lug on the PC Board in the direction of the arrow (❾).



BLOCK LEVEL DIAGRAM


IN
VR1
SENSITIVITY
P.CON
(X07-2410)
IC1
ISOLATION
IC2
LPF
Q17,18
AVR
Q1~16
DRIVER
(X00-2500)
Q3~14
VIG
Q15~30
DLD
Q31,34
Hi POWER
Q35~38
Lo POWER
OUT
IC2,Q39~41
PROTECTION
Q42~44
P. CON DET
Q45,46
MUTE
IC1,Q47~52
DC-DC CONVERTOR
+
DC IN
P CON

CIRCUIT DESCRIPTION

Function of components

Power Amplifier Unit (X07-2410-10)

Components	Use/Function	Operation/Condition/Interchangeability
Q1, 2	Input mute	Operates the input muting function with quick timing than relay when amplifier is OFF, to cut the relay in non-signal for protection of contacts.
Q3, 4	Mute driver	When the base of Q3 is active high, Q3 and Q4 are turned ON to activate muting function.
Q5, 6	Input differential amp	Applies input to one end and negative feedback to the other end to determine the amplifying gain, while setting the output of speaker ends to DC zero.
Q7~10	2nd differential amp	
Q11~14	3rd differential amp	
Q15, 16	Current mirror	Load of Q13, Q14 of third stage differential circuit.
Q17	+20V AVR	
Q18	−20V AVR	
Q19	LED SW	
IC1	Isolation amp	Eliminates automobile noise introduced to the amplifier input.
IC2	Operation amp	Consists the active LPF for Sub Woofer.

Power Supply Unit (X00-2500-10)

Components	Use/Function	Operation/Condition/Interchangeability
Q1	Temp. compensation (Lch)	
Q2	Temp. compensation (Rch)	
Q3~10	VIG cascade	For stabilization of the collector voltage at the driver of amplifier section.
Q11~14	Power amp driver	
Q15~22	DLD switching	
Q23~30	DLD level detector	
Q31~34	Power (amp section)	Hi power
Q35~38	Power (amp section)	Lo power
Q39~41	Current detector	Detects overcurrent and controls the protection IC.
Q42	P. CON voltage detector	
Q43	Detect the P. CON "ON"	When Q42 is turned ON by receiving P. CON signal, Q43 turns ON to pull out the base voltage of Q44.
Q44	Power switch	When Q43 is turned $\overline{\text{ON}}$ and the base voltage is pulled out, Q44 is turned $\overline{\text{ON}}$ and the power voltage is supplied to IC1.
Q45, 46	Mute driver	Mutes the input signal when the protection IC operates.
Q47,48	Switching driver	
Q49~52	Switching power	
IC1	Switching regulator (control IC)	Provides the dead time on switching waveform.
IC2	Protection	Detects overload, DC offset and P. CON.

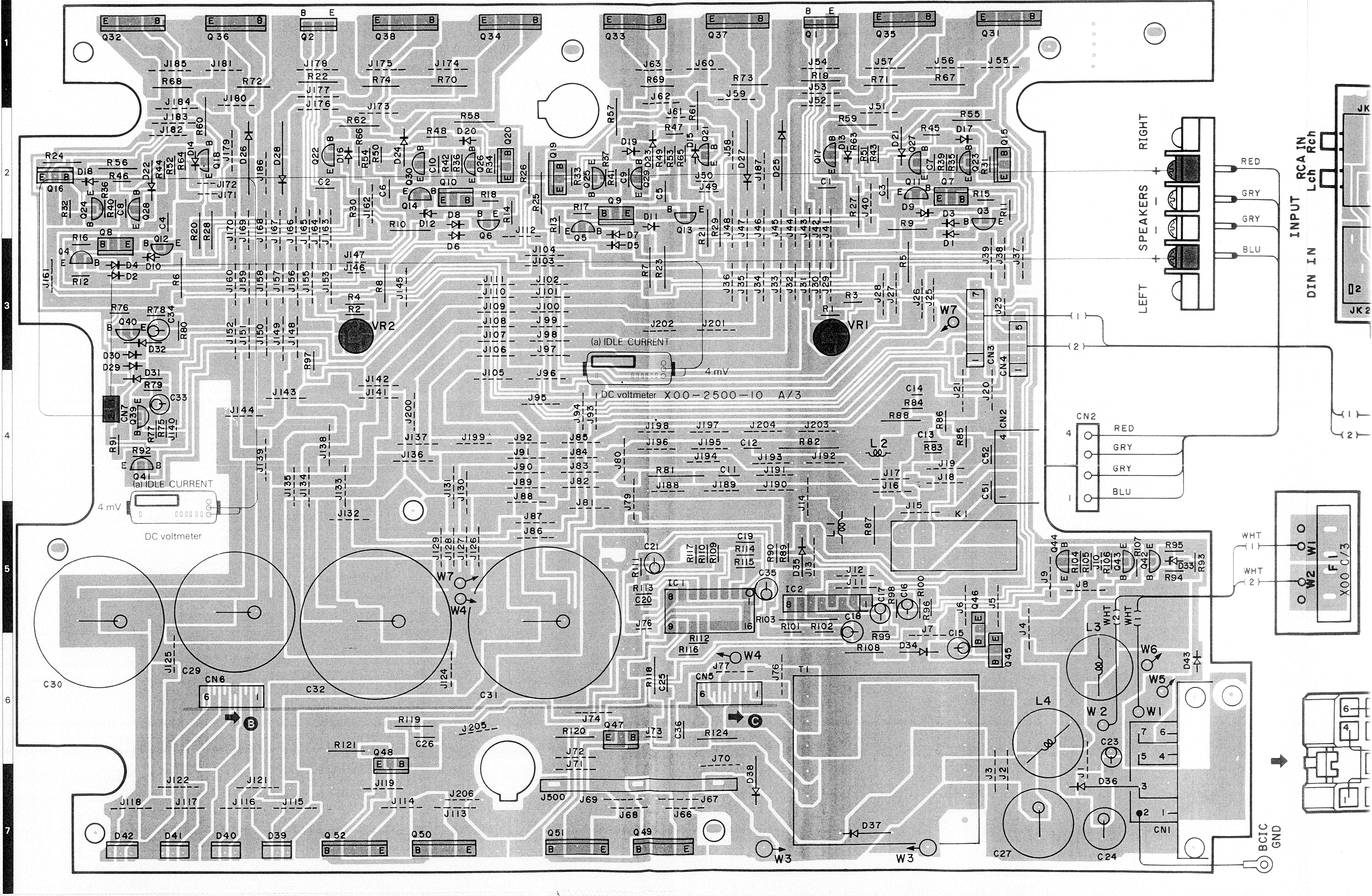
ADJUSTMENT/REGLAGE/ABGLEICH

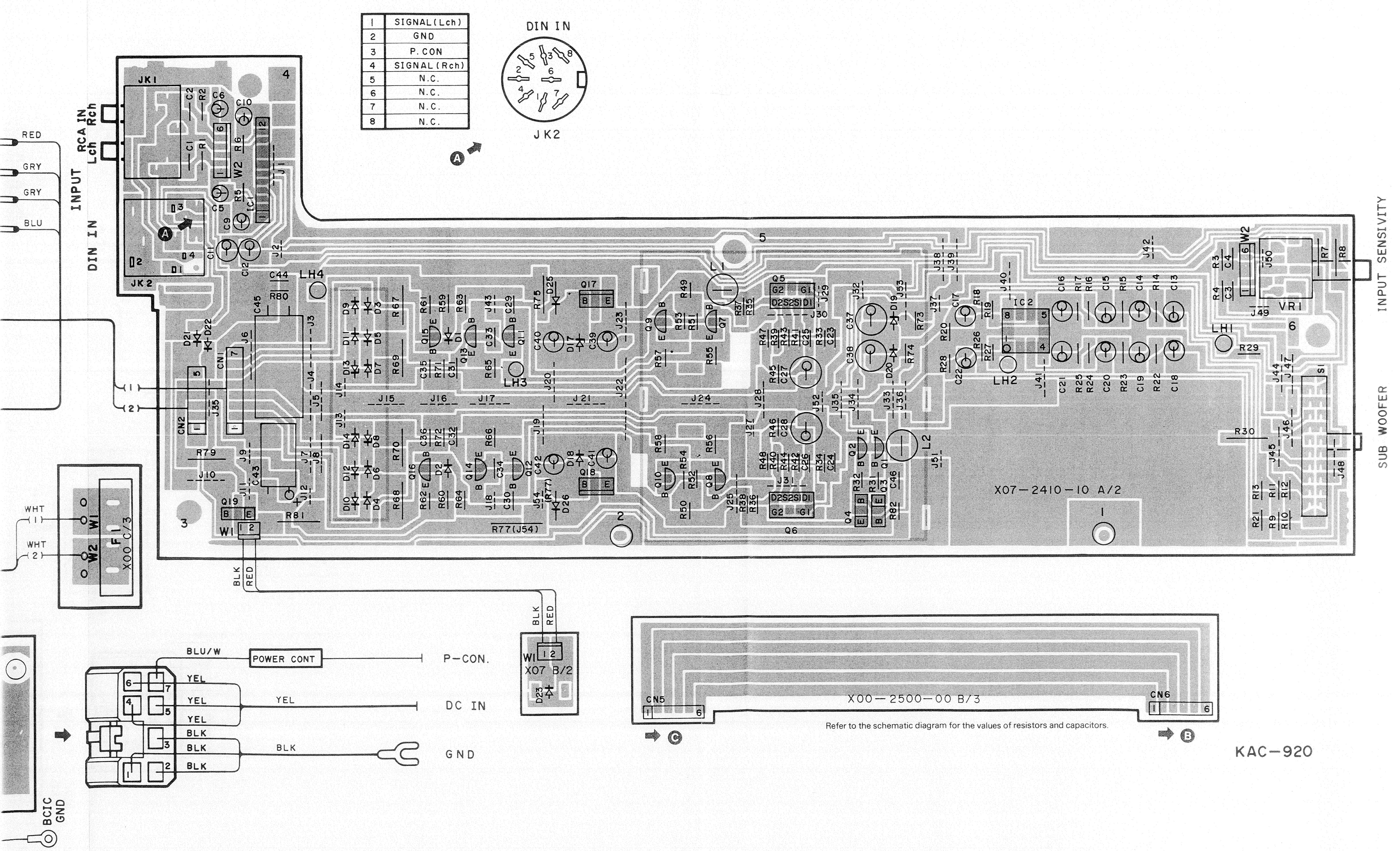
No.	ITEM	INPUT SETTINGS	OUTPUT SETTINGS	AMPLIFIER SETTINGS	ALIGNMENT POINTS	ALIGN FOR	FIG.
Connect a cassette deck.							
1	IDLE CURRENT	–	Connect a DC voltmeter to: CN7 (L, R)	VOLUME: 0	VR1 (L) VR2 (R)	4mV	(a)

N°	ITEM	REGLAGE DE L'ENTREE	REGLAGE DE LA SORTIE	REGLAGE DE L'AMPLIFICATEUR	POINT L'ALIGNEMENT	ALIGNER POUR	FIG.
Raccorder une platine à cassette.							
1	COURANT DE POLARISATION	–	Raccorder un voltmètre CC à: CN7 (G, D)	VOLUME: 0	VR1 (G) VR2 (D)	4mV	(a)

NR.	GEGENSTAND	EINGANGS-EINSTELLUNG	AUSGANGS-EINSTELLUNG	VERSTÄRKER EINSTELLUNG	ABGLEICH-PUNKTE	ABGLEICHEN FÜR	ABB.
Ein Kassettendeck anschließen.							
1	LEERLAUFSTROM	–	Einen Gleichstrom-Voltmeter anschließen an: CN7 (L, R)	VOLUME: 0	VR1 (L) VR2 (R)	4mV	(a)

PC BOARD (Component Side View)


Q32
Q36
Q2
Q38
Q34
Q33
Q37
Q1
Q35
Q31
E
B
VR2
VR1
(a) IDLE CURRENT
4 mV
DC voltmeter
X00-2500-10 A/3
RIGHT
SPEAKERS
LEFT
RED
GRY
GRY
BLU
+
−
−
+
INPUT
RCA IN
Lch
Rch
DIN IN
JK
JK2
CN2
CN3
CN4
CN1
CN5
CN6
CN7
IC1
IC2
L2
L3
L4
T1
K1
F1
X00 C/3
WHT
W1
W2
W3
W4
W5
W6
W7
BCIC GND
C30
C29
C32
C31
C27
C24
J500
1
2
3
4
5
6
7
A
B
C
D
E
F
G
H
I
J



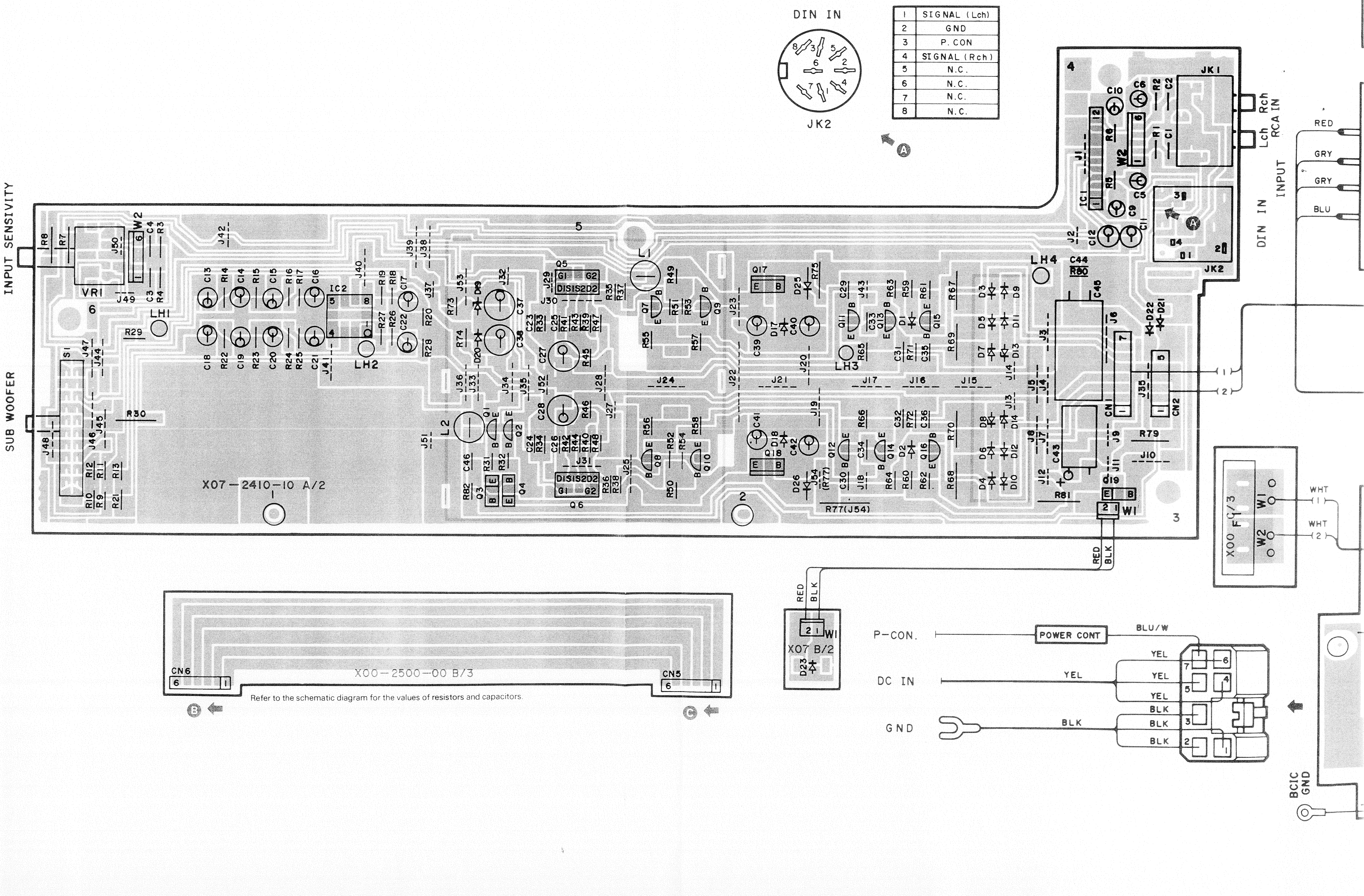
1	SIGNAL (Lch)
2	GND
3	P.CON
4	SIGNAL (Rch)
5	N.C.
6	N.C.
7	N.C.
8	N.C.

DIN IN
JK2
A
RED
GRY
GRY
BLU
INPUT
RCA IN Rch
Lch
DIN IN
JK1
JK2
IC1
IC2
CN1
CN2
LH1
LH2
LH3
LH4
L1
L2
VR1
X07-2410-10 A/2
INPUT SENSIVITY
SUB WOOFER
WHT (1)
WHT (2)
W1
W2
F1
X00 C/3
BLK
RED
BLK
RED
W1
X07 B/2
D23
BLU/W
POWER CONT
P-CON.
YEL
YEL
YEL
YEL
DC IN
BLK
BLK
BLK
BLK
GND
BCIC GND
CN5
CN6
X00-2500-00 B/3
C
B

Refer to the schematic diagram for the values of resistors and capacitors.

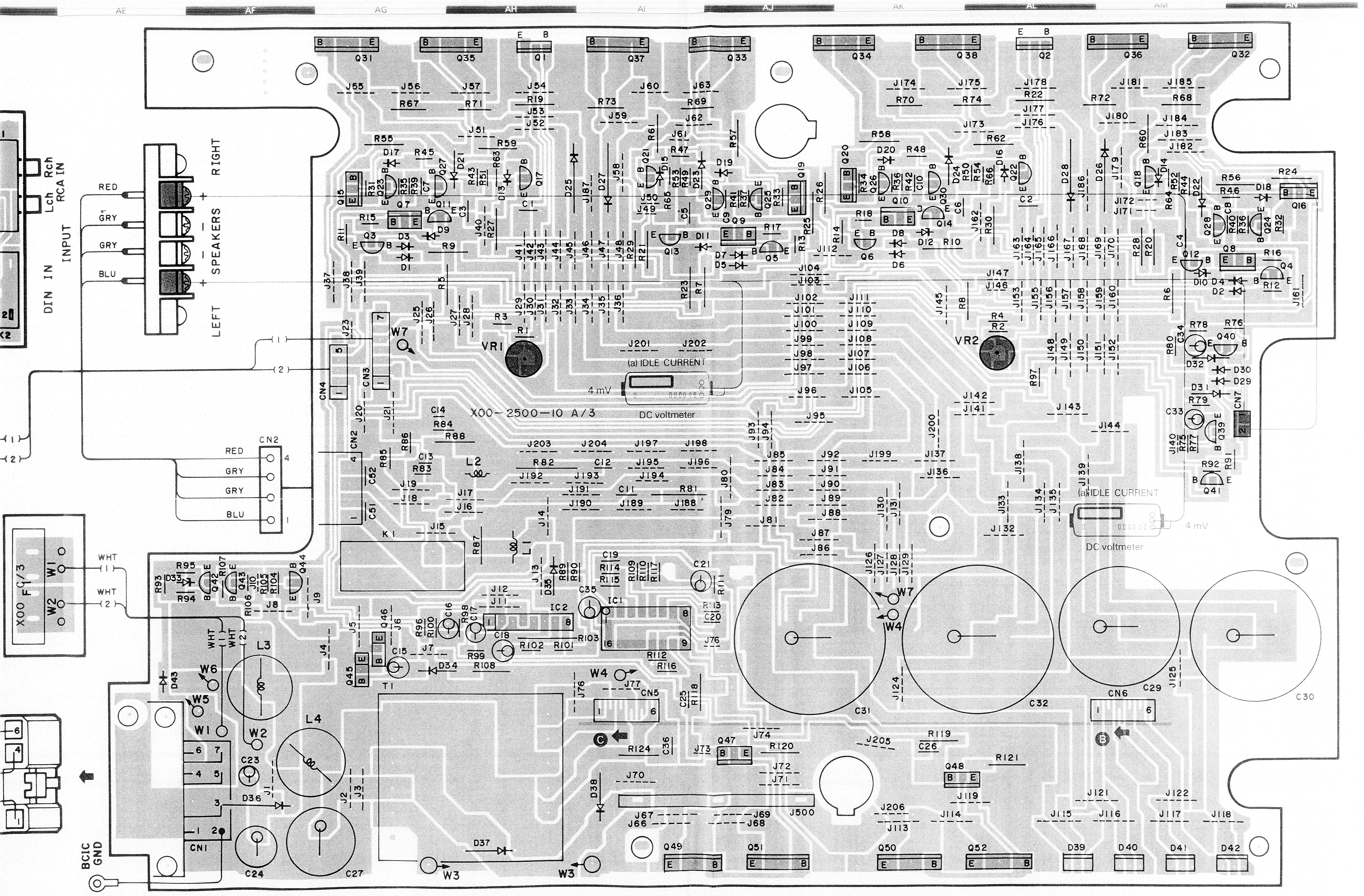
KAC-920

PC BOARD (Foil Side View)


DIN IN
JK2
8 3 5 6 2 7 1 4
Ⓐ
4
JK1
Rch
Lch
RCA IN
INPUT
DIN IN
RED
GRY
GRY
BLU
C10 C6 R2 C2 R6 W2 R1 C1 J1 IC1 R5 C5 C9 C11 C12 J2 JK2 3 Ⓐ 2 D4 D1
INPUT SENSIVITY
SUB WOOFER
VR1 W2 J50 R8 R7 C4 R3 C3 R4 J49 J42 6 LH1 R29 S1 J47 J44 J48 J46 J45 R30 R12 R11 R13 R10 R9 R21
C13 R14 C14 R15 C15 R16 R17 C16 IC2 C18 R22 C19 R23 C20 R24 R25 C21 J41 LH2
J40 R19 R18 C17 R27 R26 C22 R20 R28 J39 J38 J37 J53 D19 J32 R73 C37 R74 D20 C38
5
Q5 G1 G2 DISIS2D2 J29 J30 R35 R37 L1 R49 Q7 R51 R53 Q9 R55 R57
C23 R33 C25 R41 R43 R39 R47 C27 R45
J36 J33 J34 J35 J52 J28 J24 J27 L2 Q1 Q2 J51 C28 R46
C24 R34 C26 R42 R44 R40 R48 J31 C46 R31 R32 Q3 Q4 R82 DISIS2D2 G1 G2 Q6 R36 R38 J25
R56 R52 R54 R58 Q8 Q10 R50
X07-2410-10 A/2
Q17 D25 R75 C29 J43 R63 R59 R61 R67 D3 D9 J23 Q11 C33 Q13 D1 Q15 C39 D17 C40 R65 LH3 C31 R71 C35 R69 D5 D11 D7 D13
J22 J21 J20 J17 J16 J15 J19 C41 D18 Q18 C42 Q12 R66 C32 R72 C36 R70 D8 D14 C34 Q14 D2 Q16 D6 D12
D26 J54 (R77) C30 J18 R64 R60 R62 R68 D4 D10 R77(J54)
2
LH4 C44 R80 C45 J6 D22 D21 J3 J14 J5 J4 J13 J8 J7 J12 C43 R81 Q19 J9 J11 J10 R79 CN1 7 1 J35 5 CN2 1 2
W1 2 1
3
RED BLK
X00-C/3
W1 W2
WHT (1)
WHT (2)
RED BLK
2 1 W1
X07 B/2
D23
P-CON.
POWER CONT
BLU/W
DC IN
YEL
YEL
YEL
YEL
GND
BLK
BLK
BLK
BLK
7 6 5 4 3 2 1
BCIC GND
CN6 6 1
X00-2500-00 B/3
CN5 6 1
Ⓑ
Ⓒ

1	SIGNAL (Lch)
2	GND
3	P. CON
4	SIGNAL (Rch)
5	N.C.
6	N.C.
7	N.C.
8	N.C.

Refer to the schematic diagram for the values of resistors and capacitors.


AE
AF
AG
AH
AI
AJ
AK
AL
AM
AN
Q31
Q35
Q1
Q37
Q33
Q34
Q38
Q2
Q36
Q32
RIGHT
SPEAKERS
LEFT
Rch
RCA IN
Lch
INPUT
DIN IN
RED
GRY
GRY
BLU
VR1
VR2
X00-2500-10 A/3
(a) IDLE CURRENT
4 mV
DC voltmeter
(a) IDLE CURRENT
4 mV
DC voltmeter
CN2
RED
GRY
GRY
BLU
CN3
CN4
CN5
CN6
CN7
CN1
X00 F1/3
W1
W2
W3
W4
W5
W6
W7
WHT
L1
L2
L3
L4
IC1
IC2
K1
T1
C29
C30
C31
C32
C24
C27
BCIC GND
J500

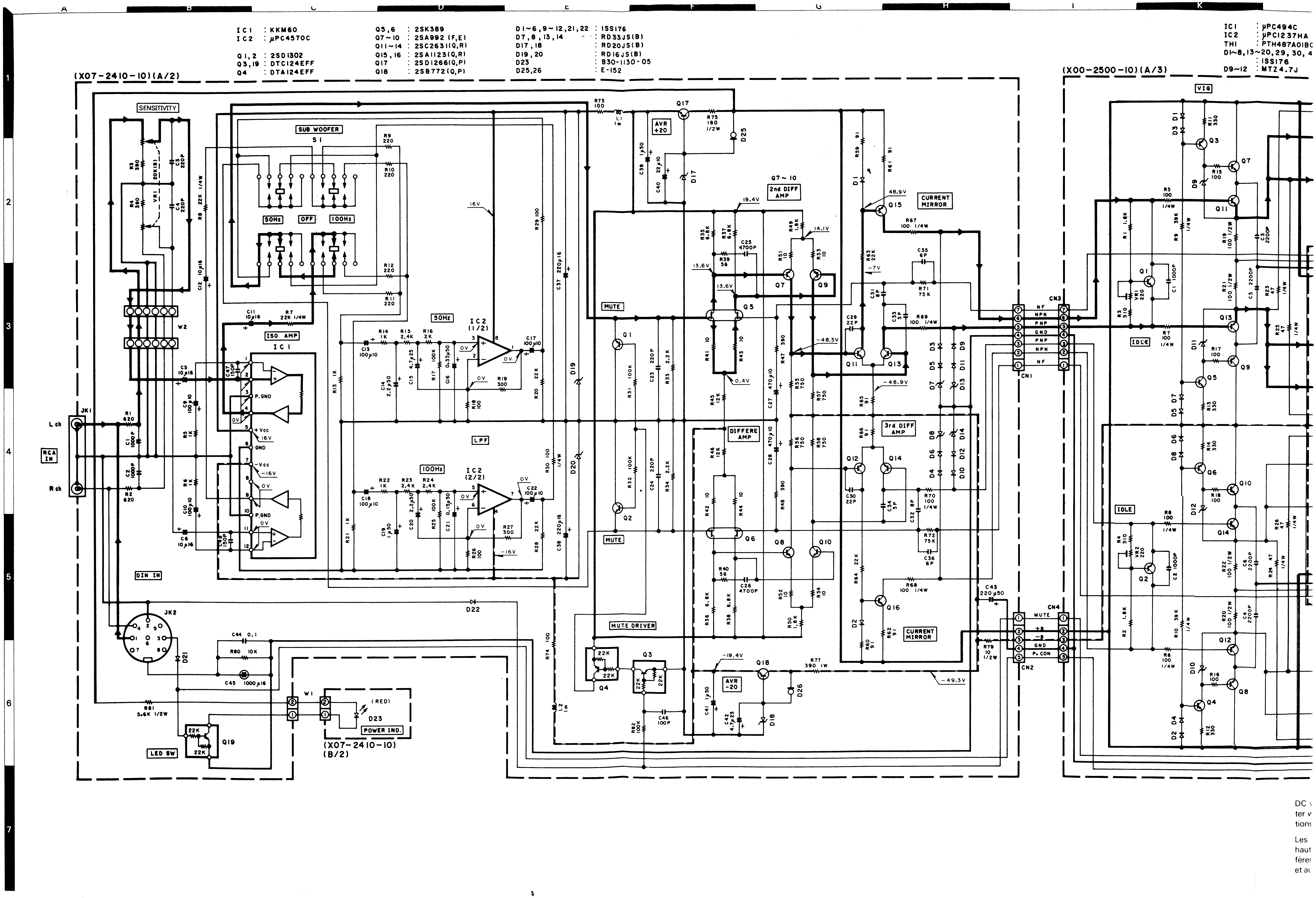
IC1 : KKM60
IC2 : µPC4570C

Q1,2 : 2SD1302
Q3,19 : DTC124EFF
Q4 : DTA124EFF

Q5,6 : 2SK389
Q7~10 : 2SA992 (F,E)
Q11~14 : 2SC2631(Q,R)
Q15,16 : 2SA1123(Q,R)
Q17 : 2SD1266(Q,P)
Q18 : 2SB772(Q,P)

D1~6,9~12,21,22 : ISS176
D7,8,13,14 : RD33JS(B)
D17,18 : RD20JS(B)
D19,20 : RD16JS(B)
D23 : B30-1130-05
D25,26 : E-152

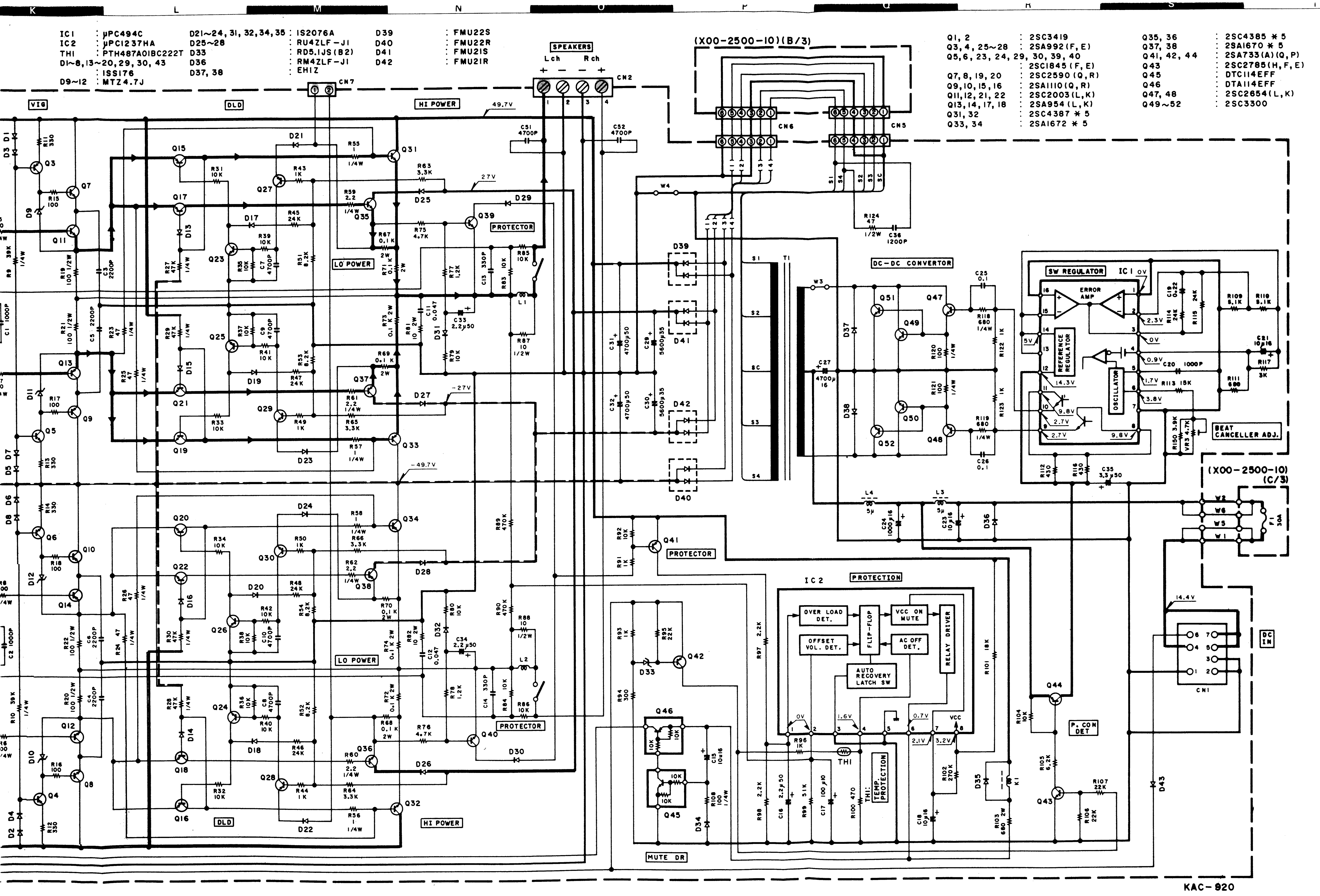
IC1 : µPC494C
IC2 : µPC1237HA
TH1 : PTH487A01BC
D1~8,13~20,29,30,4
: ISS176
D9~12 : MTZ4.7J



(X07-2410-10)(A/2)
(X00-2500-10)(A/3)
SENSITIVITY
SUB WOOFER
S1
50Hz
OFF
100Hz
ISO AMP
IC1
LPF
IC2 (1/2)
IC2 (2/2)
RCA IN
L ch
R ch
JK1
JK2
DIN IN
W1
W2
AVR +20
AVR -20
MUTE
MUTE DRIVER
DIFFERE AMP
2nd DIFF AMP
3rd DIFF AMP
CURRENT MIRROR
LED SW
POWER IND.
(RED)
D23
(X07-2410-10) (B/2)
CN1
CN2
CN3
CN4
NF
NPN
PNP
GND
MUTE
+B
-B
P.CON
VIG
IDLE
19.4V
-19.4V
48.9V
-48.9V
-48.3V
-49.3V
14.1V
13.6V
0.4V
-7V
16V
-16V
0V

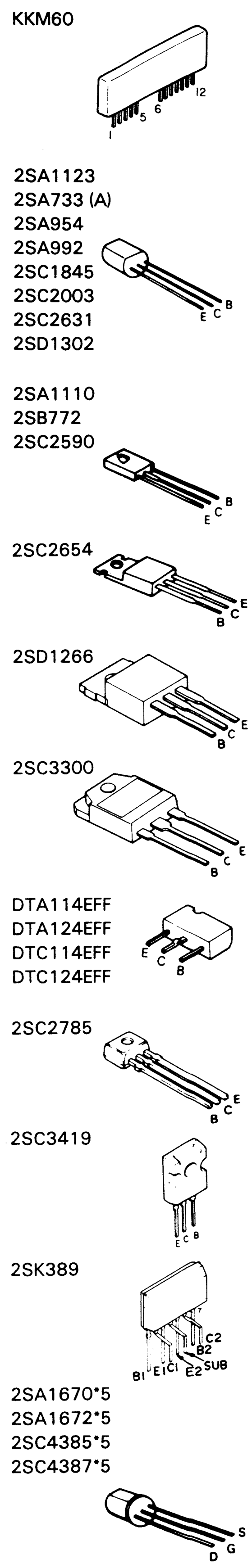
DC \
ter v
tions

Les
haut
fèrer
et au


K
L
M
N
O
P
Q
R
S
T
U
SPEAKERS
Lch
Rch
CN2
CN7
(X00-2500-10)(B/3)
CN6
CN5
VIG
DLD
HI POWER
LO POWER
49.7V
27V
-27V
-49.7V
PROTECTOR
D39
D40
D41
D42
W4
W3
T1
DC-DC CONVERTOR
SW REGULATOR
IC1
ERROR AMP
REFERENCE REGULATOR
OSCILLATOR
BEAT CANCELLER ADJ.
(X00-2500-10)(C/3)
W2
W6
W5
W1
F1 30A
14.4V
DC IN
CN1
IC2
PROTECTION
OVER LOAD DET.
OFFSET VOL. DET.
FLIP-FLOP
VCC ON MUTE
AC OFF DET.
AUTO RECOVERY LATCH SW
RELAY DRIVER
TH1
TH1: TEMP. PROTECTION
K1
P. CON DET
MUTE DR
Q46
Q45
KAC-920

IC1	: μPC494C	D21~24, 31, 32, 34, 35	: 1S2076A	D39	: FMU22S
IC2	: μPC1237HA	D25~28	: RU4ZLF-J1	D40	: FMU22R
TH1	: PTH487A01BC222T	D33	: RD5.1JS(B2)	D41	: FMU21S
D1~8, 13~20, 29, 30, 43	: 1SS176	D36	: RM4ZLF-J1	D42	: FMU21R
D9~12	: MTZ4.7J	D37, 38	: EH1Z		

Q1, 2	: 2SC3419	Q35, 36	: 2SC4385 ✱ 5
Q3, 4, 25~28	: 2SA992(F, E)	Q37, 38	: 2SA1670 ✱ 5
Q5, 6, 23, 24, 29, 30, 39, 40	: 2SC1845(F, E)	Q41, 42, 44	: 2SA733(A)(Q, P)
Q7, 8, 19, 20	: 2SC2590(Q, R)	Q43	: 2SC2785(H, F, E)
Q9, 10, 15, 16	: 2SA1110(Q, R)	Q45	: DTC114EFF
Q11, 12, 21, 22	: 2SC2003(L, K)	Q46	: DTA114EFF
Q13, 14, 17, 18	: 2SA954(L, K)	Q47, 48	: 2SC2654(L, K)
Q31, 32	: 2SC4387 ✱ 5	Q49~52	: 2SC3300
Q33, 34	: 2SA1672 ✱ 5		

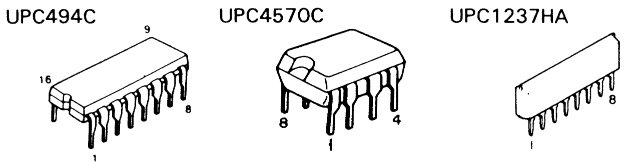

KKM60
1
5
6
12
2SA1123
2SA733 (A)
2SA954
2SA992
2SC1845
2SC2003
2SC2631
2SD1302
E C B
2SA1110
2SB772
2SC2590
E C B
2SC2654
E C B
2SD1266
B C E
2SC3300
B C E
DTA114EFF
DTA124EFF
DTC114EFF
DTC124EFF
E C B
2SC2785
B C E
2SC3419
E C B
2SK389
B1 E1 C1 E2 C2 B2 SUB
2SA1670*5
2SA1672*5
2SC4385*5
2SC4387*5
S
G
D

DC voltages are as measured with a high impedance voltmeter with no signal input. Values may vary slightly due to variations between individual instruments or/and units.

Les tensions c.c. doivent être mesurées avec un voltmètre à haute impédance sans signal d'entrée. Les valeurs peuvent différer légèrement du fait des variations inhérentes aux appareils et aux instruments de mesure individuels.

Die angegebenen Gleichspannungswerte wurden mit einem hochohmigen Spannungsmesser ohne Eingangssignal gemessen. Dabei schwanken die Meßwerte aufgrund von Unterschieden zwischen einzelnen Instrumenten oder Geräten u. U. geringfügig.

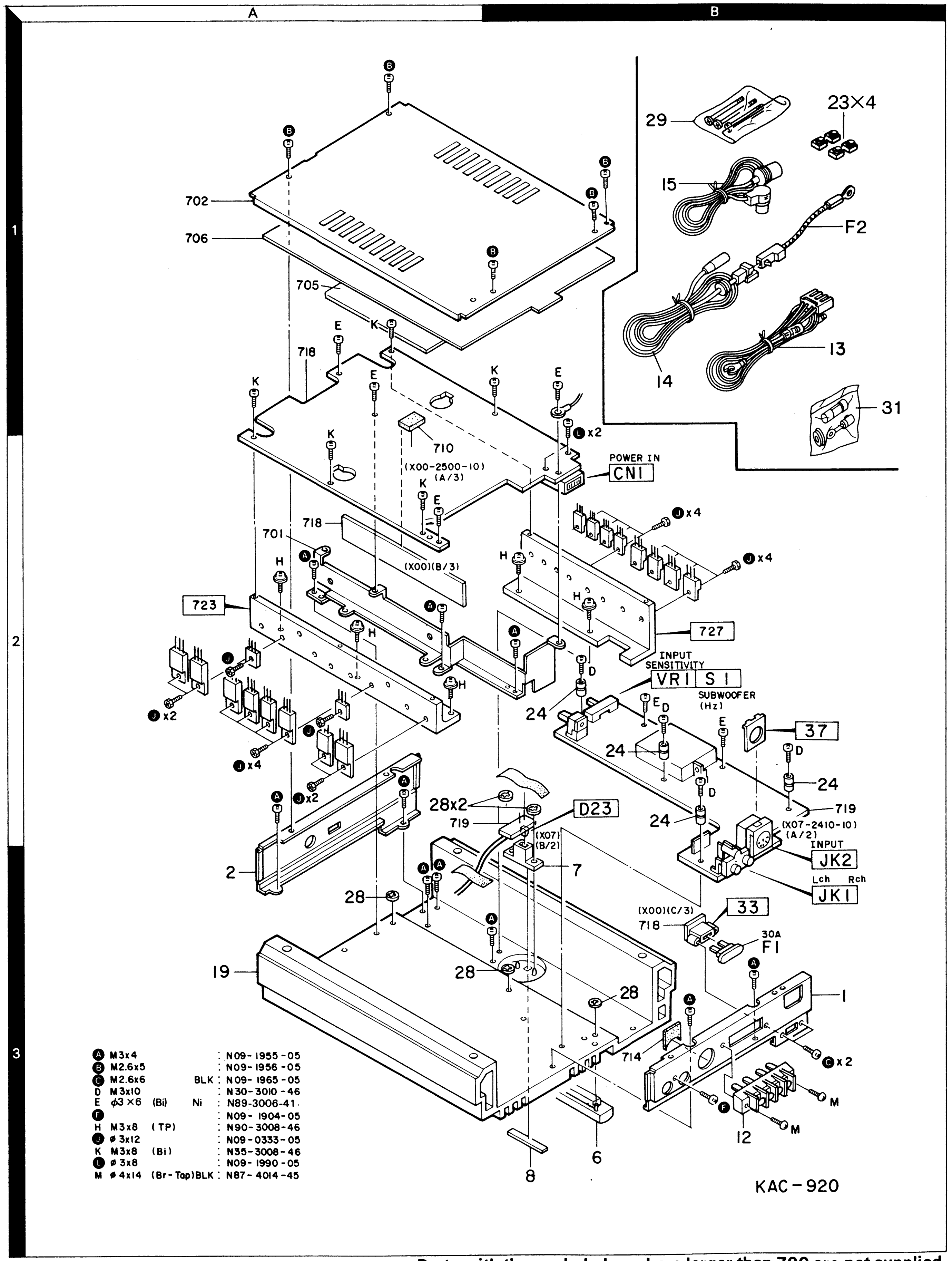
CAUTION: For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list). ⚠ Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.


UPC494C
16
9
1
8
UPC4570C
8
4
UPC1237HA
1
8

KAC-920

KENWOOD

EXPLODED VIEW



A	M3x4		: N09-1955-05
B	M2.6x5		: N09-1956-05
C	M2.6x6	BLK	: N09-1965-05
D	M3x10		: N30-3010-46
E	ϕ3 ×6 (Bi)	Ni	: N89-3006-41
F			: N09-1904-05
H	M3x8 (TP)		: N90-3008-46
J	ø 3x12		: N09-0333-05
K	M3x8 (Bi)		: N35-3008-46
L	ø 3x8		: N09-1990-05
M	ø 4x14 (Br-Tap)	BLK	: N87-4014-45

Parts with the exploded numbers larger than 700 are not supplied.

PARTS LIST

⋇ New Parts
Parts without **Parts No.** are not supplied.
Les articles non mentionnes dans le **Parts No.** ne sont pas fournis.
Telle ohne **Parts No.** werden nicht gellefert.

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格	Destination 仕向	Remarks 備考
				KAC-920		
1	3B	⋇	A20-5415-03	PANEL		
2	3A	⋇	A23-3723-03	REAR PANEL		
6	3B		B07-1783-03	ESCUTCHEON		
7	3B		B19-0541-04	LIGHTING BOARD		
8	3B		B43-0283-04	KENWOOD BADGE		
–			B46-0100-10	WARRANTY CARD		
–		⋇	B50-8636-00	INSTRUCTION MANUAL(ENGLISH)		
–		⋇	B50-8898-00	INSTRUCTION MANUAL(GER,ITA)	ET	
–			B58-0803-13	CAUTION CARD	E	
–			B58-0870-04	CAUTION CARD		
–		⋇	B58-0872-04	CAUTION CARD		
12	3B	⋇	E20-0471-05	SCREW TERMINAL BOARD(SPEAKERS)		
13	1B	⋇	E30-2302-05	DC CORD		
14	1B	⋇	E30-2442-05	DC CORD		
15	1B	⋇	E30-2306-05	CORD WITH DIN CONNECTOR	ET	
15	1B	⋇	E30-2384-05	CORD WITH DIN CONNECTOR	K	
19	3A	⋇	F01-1200-01	HEAT SINK		
F1	3B	⋇	F05-3033-05	FUSE (30A)		
F2	1B	⋇	F05-2631-05	FUSE (FUSIBLE RING WIRE)		
–		⋇	H01-7729-04	ITEM CARTON CASE		
–		⋇	H03-0987-04	OUTER CARTON CASE		
–			H10-3523-13	POLYSTYRENE FOAMED FIXTURE		
–			H25-0112-04	PROTECTION BAG (180X250X0.05)		
–			H25-0192-04	PROTECTION BAG (125X160X0.05)		
–			H25-0321-04	PROTECTION BAG		
23	1B	⋇	J02-0372-14	FOOT		
24	2B	⋇	J19-2932-04	UNIT HOLDER		
28	3A,3B		N29-0252-05	RETAINING RING (Ø2)		
29	1B	⋇	N99-0267-05	SCREW SET		
A	3A,3B		N09-1955-05	MACHINE SCREW (M3X4)		
B	1A,1B		N09-1956-05	TAPTITE SCREW (M2.6X5)		
C	3B		N09-1965-05	TAPTITE SCREW		
F	3B		N09-1904-05	TAPTITE SCREW		
31		⋇	W01-0189-08	ACCESSORY		
				POWER SUPPLY UNIT (X00-2500-10)		
C1 ,2			CF92V1H102J	MF 1000PF J		
C3 -6			CF92V1H222J	MF 2200PF J		
C7 -10			CF92V1H472J	MF 4700PF J		
C11 ,12			CF92V1H473J	MF 0.047UF J		
C13 ,14			CK45B1H331K	CERAMIC 330PF K		
C15			CE04DW1C100M	ELECTRO 10UF 16WV		
C16			C90-0508-05	ELECTRO 2.2UF 50WV		
C17			CE04DW1A101M	ELECTRO 100UF 10WV		
C18			CE04DW1C100M	ELECTRO 10UF 16WV		
C19			CF92FV1H224J	MF 0.22UF J		
C20			CF92V1H102J	MF 1000PF J		
C21			CE04DW1C100M	ELECTRO 10UF 16WV		
C23			CE04DW1C100M	ELECTRO 10UF 16WV		
C24			C90-1403-05	ELECTRO 1000UF 16WV		
C25 ,26			CF92V1H104J	MF 0.10UF J		
C27		⋇	C90-1633-05	ELECTRO 4700UF 16WV		

E: Scandinavia & Europe **K**: USA **P**: Canada **W**:Europe
U: PX(Far East, Hawaii) **T**: England **M**: Other Areas
UE : AAFES(Europe) **X**: Australia

⚠ indicates safety critical components.

PARTS LIST

⁎ New Parts
Parts without **Parts No.** are not supplied.
Les articles non mentionnes dans le **Parts No.** ne sont pas fournis.
Teile ohne **Parts No.** werden nicht geliefert.

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格	Desti-nation 仕向	Re-marks 備考
C29 ,30		⁎	C90-1619-05	ELECTRO 5600UF 35WV		
C31 ,32		⁎	C90-1618-05	ELECTRO 4700UF 50WV		
C33 ,34			C90-0508-05	ELECTRO 2. 2UF 50WV		
C35			CE04DW1H3R3M	ELECTRO 3. 3UF 50WV		
C36			CF92V1H122J	MF 1200PF J		
C51 ,52			CF92V1H472J	MF 4700PF J		
CN1	2B	⁎	E08-0701-05	RECTANGULAR RECEPTACLE(PWR IN)		
J500		⁎	E29-0186-05	LEAD PLATE		
33	3B	⁎	J13-0071-05	FUSE HOLDER		
L1 ,2			L39-0085-05	PHASE-COMPENSATION COIL		
L3 ,4		⁎	L33-0331-05	CHOKE COIL		
T1		⁎	L19-0054-05	TRANSFORMER FOR CONVERTER		
J	2A,2B		N09-0333-05	TAPPING SCREW (Ø3X12)TR		
L	2B		N09-1990-05	EVATITE SCREW (Ø3X8)		
R19 -22			RD14DB2H101J	SMALL-RD 100 J 1/2W		
R55 -58			RD14GB2E1R0J	FL-PROOF RD 1.0 J 1/4W		
R59 -62			RD14GB2E2R2J	FL-PROOF RD 2.2 J 1/4W		
R67 -74			R92-0205-05	METAL-PLATE 0.1 K 2W		
R81 ,82			RS14DB3D100J	FL-PROOF RS 10 J 2W		
R87 ,88			RD14DB2H100J	SMALL-RD 10 J 1/2W		
R103			RS14KB3D681J	FL-PROOF RS 680 J 2W		
R124			RD14DB2H470J	SMALL-RD 47 J 1/2W		
VR1 ,2			R12-0092-05	TRIMMING POT.(220) IDLE		
VR3			R12-1069-05	TRIMMING POT. (4.7K) BEAT CANC		
K1			S51-2078-05	MAGNETIC RELAY		
D1 -8			1SS176	DIODE		
D9 -12			MTZ4.7J	ZENER DIODE		
D13 -20			1SS176	DIODE		
D21 -24			1S2076A	DIODE		
D25 -28		⁎	RU4ZLF-J1	DIODE		
D29 ,30			1SS176	DIODE		
D31 ,32			1S2076A	DIODE		
D33			RD5.1JS(B2)	ZENER DIODE		
D34 ,35			1S2076A	DIODE		
D36		⁎	RM4ZLF-J1	DIODE		
D37 ,38			EH1Z	DIODE		
D39		⁎	FMU22S	DIODE		
D40		⁎	FMU22R	DIODE		
D41		⁎	FMU21S	DIODE		
D42		⁎	FMU21R	DIODE		
D43			1SS176	DIODE		
IC1			UPC494C	IC(SWITCHING REGULATOR)		
IC2			UPC1237HA	IC(POWER AMP)		
Q1 ,2			2SC3419	TRANSISTOR		
Q3 ,4			2SA992(F,E)	TRANSISTOR		
Q5 ,6			2SC1845(F,E)	TRANSISTOR		
Q7 ,8			2SC2590(Q,R)	TRANSISTOR		
Q9 ,10			2SA1110(Q,R)	TRANSISTOR		
Q11 ,12			2SC2003(L,K)	TRANSISTOR		
Q13 ,14			2SA954(L,K)	TRANSISTOR		
Q15 ,16			2SA1110(Q,R)	TRANSISTOR		
Q17 ,18			2SA954(L,K)	TRANSISTOR		

E: Scandinavia & Europe **K:** USA **P:** Canada **W:** Europe
U: PX(Far East, Hawaii) **T:** England **M:** Other Areas
UE : AAFES(Europe) **X:** Australia

⚠ indicates safety critical components.

PARTS LIST

⁎ New Parts
Parts without **Parts No.** are not supplied.
Les articles non mentionnes dans le **Parts No.** ne sont pas fournis.
Teile ohne **Parts No.** werden nicht geliefert.

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格	Desti-nation 仕向	Re-marks 備考
Q19 ,20			2SC2590(Q,R)	TRANSISTOR		
Q21 ,22			2SC2003(L,K)	TRANSISTOR		
Q23 ,24			2SC1845(F,E)	TRANSISTOR		
Q25 -28			2SA992(F,E)	TRANSISTOR		
Q29 ,30			2SC1845(F,E)	TRANSISTOR		
Q31 ,32		⁎	2SC4387⁎5	TRANSISTOR		
Q33 ,34		⁎	2SA1672⁎5	TRANSISTOR		
Q35 ,36		⁎	2SC4385⁎5	TRANSISTOR		
Q37 ,38		⁎	2SA1670⁎5	TRANSISTOR		
Q39 ,40			2SC1845(F,E)	TRANSISTOR		
Q41 ,42			2SA733(A)(Q,P)	TRANSISTOR		
Q43			2SC2785(H,F,E)	TRANSISTOR		
Q44			2SA733(A)(Q,P)	TRANSISTOR		
Q45			DTC114EFF	DIGITAL TRANSISTOR		
Q46			DTA114EFF	DIGITAL TRANSISTOR		
Q47 ,48		⁎	2SC2654(L,K)	TRANSISTOR		
Q49 -52			2SC3300	TRANSISTOR		
TH1		⁎	PTH487A01BC222T	THERMISTOR		
POWER AMPLIFIER UNIT (X07-2410-10)						
D23	2B		B30-1130-05	LED(SLH-38VC3) RED, PO IND.		
C1 ,2			CK45FB1H102K	CERAMIC 1000PF K		
C3 ,4			CC45FSL1H221J	CERAMIC 220PF J		
C5 ,6			CE04DW1C100M	ELECTRO 10UF 16WV		
C9 ,10		⁎	C90-1640-05	ELECTRO 100UF 10WV		
C11 ,12			CE04DW1C100M	ELECTRO 10UF 16WV		
C13			CE04DW1A101M	ELECTRO 100UF 10WV		
C14			CE04DW1H2R2M	ELECTRO 2. 2UF 50WV		
C15			CE04DW1E4R7M	ELECTRO 4. 7UF 25WV		
C16			CE04CW1HR33M	ELECTRO 0. 33UF 50WV		
C17 ,18			CE04DW1A101M	ELECTRO 100UF 10WV		
C19			CE04DW1H010M	ELECTRO 1. 0UF 50WV		
C20			CE04DW1H2R2M	ELECTRO 2. 2UF 50WV		
C21			CE04CW1HR15M	ELECTRO 0. 15UF 50WV		
C22			CE04DW1A101M	ELECTRO 100UF 10WV		
C23 ,24			CC45FSL1H221J	CERAMIC 220PF J		
C25 ,26		⁎	CF92FV1H472J	MF 4700PF J		
C27 ,28		⁎	C90-1642-05	ELECTRO 470UF 10WV		
C29 ,30			CC45FSL1H220J	CERAMIC 22PF J		
C31 ,32			CC45FSL1H080D	CERAMIC 8. 0PF D		
C33 ,34			CC45FSL1H050C	CERAMIC 5. 0PF C		
C35 ,36			CC45FSL1H060D	CERAMIC 6. 0PF D		
C37 ,38			CE04DW1C221M	ELECTRO 220UF 16WV		
C39			CE04DW1H010M	ELECTRO 1. 0UF 50WV		
C40			CE04DW1A220M	ELECTRO 22UF 10WV		
C41			CE04DW1H010M	ELECTRO 1. 0UF 50WV		
C42			CE04DW1E4R7M	ELECTRO 4. 7UF 25WV		
C43		⁎	CE04DW1H221M	ELECTRO 220UF 50WV		
C44			CF92FV1H104J	MF 0. 10UF J		
C45			C90-1630-05	NP-ELEC 1000UF 16WV		
C46			CC45FSL1H101J	CERAMIC 100PF J		
C47 ,48			CF92V1H151K	CERAMIC 150PF J		
JK1	3B	⁎	E13-0241-05	PHONO JACK (RCA IN)		
JK2	3B		E06-0816-05	REC/PLAY JACK (DIN IN)		
37	2B	⁎	J21-5142-04	JACK MOUNTING HARDWARE		

E: Scandinavia & Europe **K:** USA **P:** Canada **W:** Europe
U: PX(Far East, Hawaii) **T:** England **M:** Other Areas
UE : AAFES(Europe) **X:** Australia

⚠ indicates safety critical components.

PARTS LIST

⁎ New Parts

Parts without **Parts No.** are not supplied.

Les articles non mentionnes dans le **Parts No.** ne sont pas fournis.

Teile ohne **Parts No.** werden nicht geliefert.

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格	Destination 仕向	Remarks 備考
L1 ,2		⁎	L33-0344-05	CHOKE COIL		
R75		⁎	RD14DB2H181J	SMALL-RD 180 J 1/2W		
R77			RS14KB3A391J	FL-PROOF RS 390 J 1W		
R79			RD14DB2H100J	SMALL-RD 10 J 1/2W		
R81		⁎	RD14DB2H562J	SMALL-RD 5.6K J 1/2W		
VR1	2B		R10-3030-05	POTENTIOMETER(20KB)INPUT SENS		
S1	2B	⁎	S31-4024-05	SLIDE SWITCH (SUB WOOFER)		
D1 -6			1SS176	DIODE		
D7 ,8		⁎	RD33JS(B)	ZENER DIODE		
D9 -12			1SS176	DIODE		
D13 ,14		⁎	RD33JS(B)	ZENER DIODE		
D17 ,18		⁎	RD20JS(B)	ZENER DIODE		
D19 ,20		⁎	RD16JS(B)	ZENER DIODE		
D21 ,22			1SS176	DIODE		
D25 ,26			E-152	CONSTANT CURRENT DIODE		
IC1		⁎	KKM60	IC(ISOLATION AMP)		
IC2			UPC4570C	IC(OP AMP X2)		
Q1 ,2			2SD1302	TRANSISTOR		
Q3			DTC124EFF	DIGITAL TRANSISTOR		
Q4			DTA124EFF	DIGITAL TRANSISTOR		
Q5 ,6		⁎	2SK389	TRANSISTOR		
Q7 -10			2SA992(F,E)	TRANSISTOR		
Q11 -14			2SC2631(Q,R)	TRANSISTOR		
Q15 ,16			2SA1123(Q,R)	TRANSISTOR		
Q17			2SD1266(Q,P)	TRANSISTOR		
Q18			2SB772(Q,P)	TRANSISTOR		
Q19			DTC124EFF	DIGITAL TRANSISTOR		
SCREW SET (N99-0267-05)						
--			N46-5063-45	TAPPING SCREW		

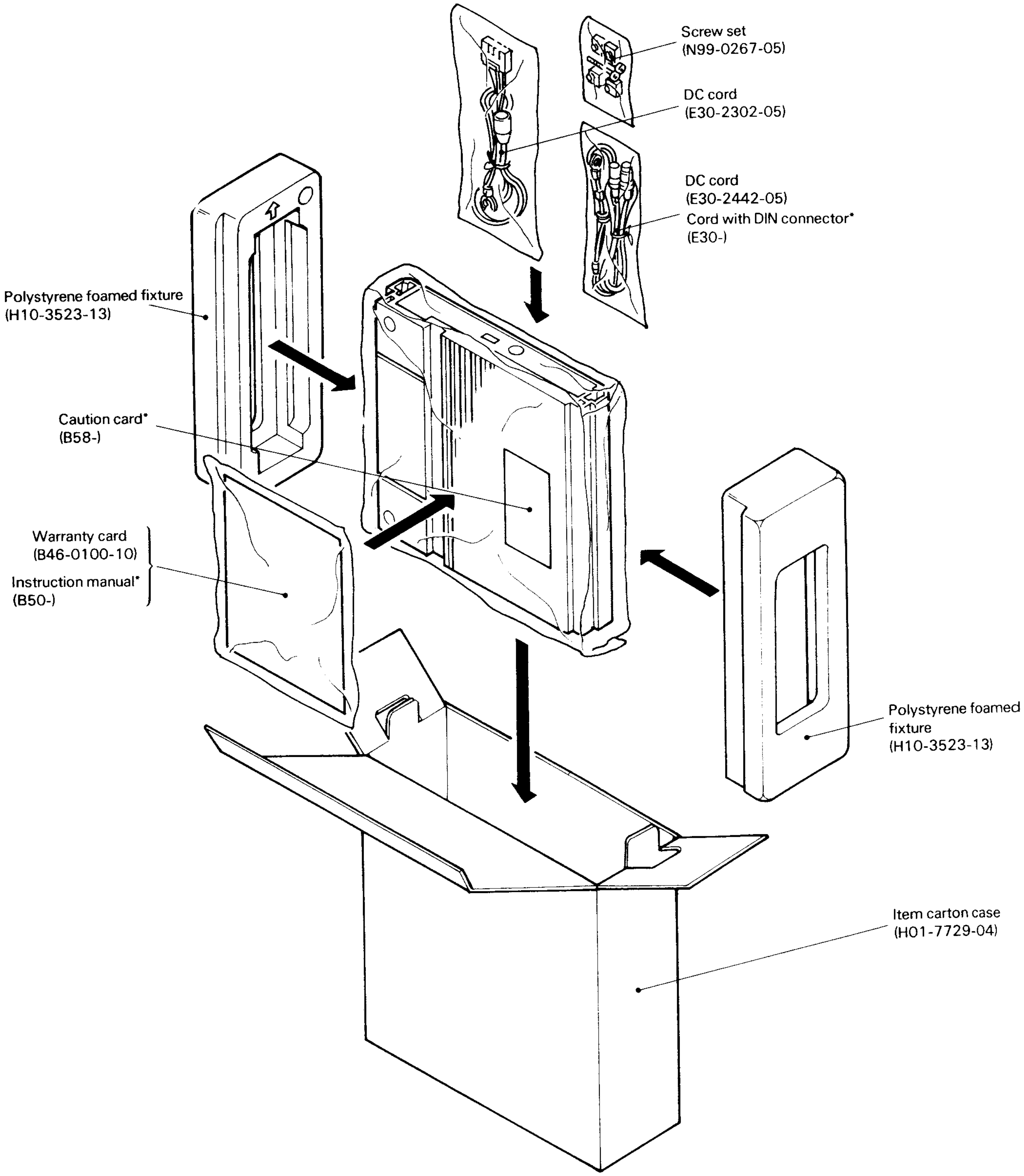
E: Scandinavia & Europe K: USA P: Canada W:Europe

U: PX(Far East, Hawaii) T: England M: Other Areas

UE : AAFES(Europe) X: Australia

⚠ indicates safety critical components.

PACKING


Screw set
(N99-0267-05)
DC cord
(E30-2302-05)
DC cord
(E30-2442-05)
Cord with DIN connector*
(E30-)
Polystyrene foamed fixture
(H10-3523-13)
Caution card*
(B58-)
Warranty card
(B46-0100-10)
Instruction manual*
(B50-)
Polystyrene foamed fixture
(H10-3523-13)
Item carton case
(H01-7729-04)

* Refer to parts list on page xx.

SPECIFICATIONS

Specifications subject to change without notice

Main amp section

Maximum output power (1 kHz, 4 Ω)	160W+160W
Rated output power (10% THD, 1 kHz, 4 Ω)	140W+140W
(less than 0.5% THD, 20 Hz - 20 kHz, 4 Ω)	95W+95W
Frequency response (−3 dB)	2Hz—100kHz
Input sensitivity (at rated output) Max.	0.1V
Min.	5.0V
Signal-to-noise ratio	100dB
Input impedance	10k Ω
Damping factor (100 Hz)	More than 200
Sub woofer frequency	50Hz, 100Hz

General

Operating voltage (GND)	14.4V(11—16V)
Current consumption	30A
Dimensions (W x H x D)	250 × 60 × 300mm (9-13/16 × 2-3/8 × 11-13/16in.)
Weight	4.9kg(10.8lb)

KENWOOD CORPORATION
Shionogi Shibuya Building, 17-5, 2-chome Shibuya, Shibuya-ku, Tokyo 150, Japan

KENWOOD U.S.A. CORPORATION
2201 East Dominguez Street, Long Beach, CA 90810;
550 Clark Drive, Mount Olive, NJ 07828, U.S.A.

KENWOOD ELECTRONICS CANADA INC.
P.O. Box 1075 959 Gana Court, Mississauga, Ontario, Canada L4T 4C2

KENWOOD ELECTRONICS BENELUX N.V.
Mechelsesteenweg 418 B-1930 Zaventem, Belgium

KENWOOD ELECTRONICS DEUTSCHLAND GMBH
Rembrucker-Str. 15, 6056 Heusenstamm, West Germany

TRIO-KENWOOD FRANCE S.A.
Hi-Fi•VIDEO•CAR Hi-Fi
13, Boulevard Ney, 75018 Paris, France

TRIO-KENWOOD U.K. LTD.
17 Bristol Road, The Metropolitan Centre, Greenford, Middx. UB6 8UP England

KENWOOD ELECTRONICS AUSTRALIA PTY. LTD.
4E Woodcock Place, Lane Cove, N.S.W. 2066, Australia

KENWOOD & LEE ELECTRONICS, LTD.
Wang Kee Building, 4th Floor, 34-37, Connaught Road, Central, Hong Kong